

REMARKS

Claims 1, 6, 9, 12, 16, 19, 23-26, 34, 35, 37, 40, 41, 44-46, 50 and 52 are amended.
Claims 1, 2, 6, 7, 9-12, 16, 17 and 19-52 are currently pending in the application.
Reconsideration of the application, as amended, is respectfully requested.

I. Claims 1, 2, 6, 9-12, 16, 17 and 19-52 Satisfy 35 U.S.C. §112¶1

The Office action rejects claims 1, 2, 6, 9-12, 16, 17 and 19-52 on the basis that the “electronic design” limitation does not appear verbatim in the application. Applicants note, however, that the “subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement. MPEP §2163.02. The Office action rejection is contrary to this well established principle and various sections of the application that discuss Integrated Circuit design and components thereof, e.g., RF and wireless components. To expedite prosecution, Applicants have replaced “electronic” with “circuit” which is discussed and explicitly mentioned throughout the application. *See, e.g.*, p. 1, line 6 (computer-based design simulation); p. 2, lines 9-11 (design an integrated circuit (“IC”)); p. 2, line 17 (IC simulation); p. 10, line 6 (IP); p. 11, line 15 (RF and wireless communication devices); p. 17, line 4 (SPICETM output file); p. 23, line 8 (SPICETM output files from the teams at different computers). Accordingly, Applicant respectfully requests that the rejection under §112¶1 be withdrawn.

II. Gold is Not an Analogous Reference

Under MPEP §2141.01(a), a reference must either 1) be in the field of Applicant’s endeavor, or 2) be reasonably pertinent to the particular problem to which the invention was concerned. Gold satisfies neither criteria.

First, Gold is not in the Applicant’s field of endeavor of collaborative or cooperative circuit simulation (such as simulation of an IC). In sharp contrast, Gold is related to spacecraft simulation involving “attitude control” and “thermal, power propulsion and payload subsystems.” (Gold, col. 1, lines 8-9; col. 2, lines 25, 33-34). Persons skilled in the art readily appreciate that simulating spacecraft behavior is not in the field of simulating an IC.

Second, Gold clearly is not reasonably pertinent to the problem of simulating circuit designs on geographically disperse computers connected to a network (p. 1, line 8). Simulating spacecraft operating parameters is not related to the subject matter of the application. Simply

because Gold uses the same “simulation engine” terminology in an unrelated context for a very different purpose does not make Gold an analogous reference when it is not.

III. The Office Action Does Not Establish a *Prima Facie* Case of Obviousness

The Office action rejects the claims on the basis that “All three are analogous art since they all teach simulation via a network” and “Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the portal site of Robertson with the automated electronic design of Wang in the plurality of simulation engines of Gold...” (Office Action, p. 3, para. 7) (emphasis added). *See also*, Office action, p. 11, para. 8). The criteria for establishing a *prima facie* case under §103(a), however, is not simply whether references are analogous (which is nevertheless a prerequisite as discussed above). In addition, there must also be a suggestion or motivation to combine the references, a reasonable expectation of success, and disclosure of each and every element of a claim. MPEP §2141.01(a) (analogous art); MPEP §2142 (*prima facie* requirements).

The Office action, however, does not address all three criteria to establish a *prima facie* case, including the required suggestion or motivation to combine the references. Instead, the Office action bases the rejection on “all three are analogous art therefore it would have been obvious...” reasoning, which is insufficient to establish a *prima facie* case of obviousness under §103(a) since these assertions relate to whether reference are analogous, not whether, for example, the required suggestion or motivation to combine the references exists.

IV. Claims 1, 2, 6, 9-12, 16, 17, 19-22 and 46-52 Are Patentable Over Gold, Wang and Robertson

Independent claims 1, 9, 12, 19, 46 and 52 and respective dependent claims 2, 6, 10, 11, 16, 17, 20-22 and 47-51 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gold in view of U.S. Patent No. 6,134,516 to Wang (“Wang”) and U.S. Patent No. 6,594,799 to Robertson (“Robertson”). Under 35 U.S.C. §103(a), to establish a *prima facie* case of obviousness of a claim, all of the claim limitations must be taught or suggested, and all words in a claim must be considered in judging the patentability of that claim. MPEP §§2143; 2143.03, citing *In re Royka*, 490 F.2d 981 (CCPA 1974). There must also be some suggestion or motivation to combine the references. MPEP §§2143.01-2143.03, citing *In re Vaeck*, 947 F.2d

488 (Fed. Cir. 1991). The mere fact that a reference can be modified does not render the resultant modification obvious unless the reference also suggests the desirability of the modification. MPEP § 2143.01, citing *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). Further, if a proposed modification would render the prior art being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. MPEP §2143.01. Additionally, it is improper to combine references where the references teach away from their combination. MPEP §2145.

The Applicant respectfully traverses the rejection since the references, individually and in combination, fail to disclose or suggest each limitation of the independent claims. Accordingly, assuming *arguendo* the combination were made, the asserted combination would nevertheless fail to satisfy the requirement that each claim limitation be disclosed. Moreover, there is no suggestion or motivation to combine the references, and certain references teach away from limitations of various claim limitations.

The Office action relies on Gold as assertedly disclosing a “simulation engine” as recited in independent claims 1, 9, 12, 46 and 52. Gold, however, fails to disclose or suggest, and is not related to, a method for facilitating “a collaborative circuit design simulation...” as recited in claims 1 and 12, a system for “performing circuit simulations” as recited in claim 9, or a “circuit design simulation system” as recited in claims 46 and 52. In contrast, Gold is directed to a “spacecraft emulation system” having a “first simulation engine” that is used “to simulate the attitude control system (ACS) of the spacecraft” and a “second simulation engine” that is used process “thermal, power propulsion and payload systems” of the spacecraft. (Gold, col. 2, lines 24-54).

Gold also fails to disclose or suggest a “first simulation engine” and a “second simulation engine” as recited in independent claim 1 and the related limitations of independent claims 9, 12, 46 and 52 for the purposes of circuit simulation. Instead, the first and second “simulation” engines described by Gold are used for simulating spacecraft behavior, i.e., attitude control system and thermal, power propulsion and payload systems. (Gold, col. 2, lines 24-34).

Further, Gold fails to disclose or suggest “receiving a circuit design simulation output file at said simulation portal from said first simulation engine” and “providing said circuit design simulation output file from said simulation portal upon request to said second simulation engine” as recited in claim 1 and the related limitations of claims 9 and 12. Understandably, Gold is

completely silent as to these limitations since Gold involves a very different field, i.e., spacecraft simulation.

Gold also fails to disclose or suggest “receiving a circuit design simulation output file at said simulation portal from at least one of said plurality of design teams connected to said simulation portal” and “providing at least one of said circuit design simulation output files from said simulation portal to at least one other of said design teams connected to said simulation portal” as recited in claim 19. Gold does not disclose or suggest the use of a simulation portal and interaction with design teams as recited in claim 19. Further, Gold is understandably silent as to “selecting the optimal components for said system design based on a comparison of said circuit design simulation output files” as recited in claim 19 since Gold’s simulation engines have nothing to do with simulating circuits. (Gold, col. 2, lines 24-34).

Further, Gold does not disclose or suggest “a plurality of simulation engines in communication with the portal, the plurality of simulation engines able to send circuit design simulation output files to the portal and able to receive any of the circuit design simulation output files from the portal” as recited in claim 46 and “a plurality of web-enabled simulation engines in communication with the portal, the web-enabled simulation engines being in communication with each other so that a circuit design simulation output file generated by a first simulation engine can be sent as a circuit design input file to a second simulation engine” as recited in claim 52 in view of the above remarks. Gold also does not disclose or suggest web-enabled simulation engines that communicate with each other and that are part of a circuit design simulation system.

Wang and Robertson do not cure these many substantial deficiencies. The Office action cites Wang as assertedly disclosing collaborative electronic design. In particular, the Office action refers to column 1, line 24 of Wang. However, line 24 merely refers to EDA. The cited section of Wang does not disclose or suggest collaborative design involving first and second simulation engines coupled over a network.

The Office action cites Robertson as disclosing a portal site. Robertson explains that a portal site acts as a server that can be accessed by users. (Robertson, col. 5, lines 1-2). The purpose of the portal is to provide users access to tools and servers “in a single locale.” (Robertson, col. 5, lines 16-17). Robertson, however, does not disclose or suggest why (or how) communications between simulation engines should or could be implemented. Further,

Robertson describes a single portal that acts as a server to provide users access to electronic design tools.

Consequently, assuming *arguendo* the asserted combination of the three cited references were made, the combination would nevertheless fail to disclose or suggest each limitation of independent claims 1, 9, 12, 19, 46 and 52. Accordingly, the rejection of these claims under 35 U.S.C. §103(a) should be withdrawn. MPEP § 2143.03, citing *In re Royka*, 490 F.2d 981 (CCPA 1974).

In addition to these substantial deficiencies, there is no suggestion or motivation to combine the cited references. Gold relates to a spacecraft emulation system. (Gold, Abstract). The “simulation engines” disclosed by Gold are used for the purpose of processing spacecraft data. (Gold, col. 2, lines 24-34). Wang, on the other hand, relates to software / hardware simulation systems for use in EDA. (Wang, col. 3, lines 34-52). Robertson relates to allowing access to tools and services, such as EDA software tools, through a portal site. (Robertson, col. 5, lines 5-11). Given these substantially different fields and applications, Applicant respectfully submits that the required suggestion or motivation to combine the references is clearly lacking.

Further, Applicant also notes that Wang explains that an object of his invention is to provide a software simulator and a hardware accelerator “with a single engine” whereas Applicant’s claims refer to first and second simulation engines or a plurality of simulation engines. Additionally, Robertson teaches away from a “dynamically” created portal as recited in independent claims 23 and 35 since Robertson refers to a “single” portal. For example, Robertson explains “it would be advantageous to connect participants ... through a single portal site that facilitates information exchange and transactions” and that users have “access to a wide variety of tools and services in a single locale.” (Robertson, col. 4, lines 48-50; col. 5, lines 16-17). Dynamically creating a portal would result in multiple portals and/or create a portal that changes or is not always available, thus negating the purpose of providing a centralized and single portal or server.

Accordingly, Applicants respectfully request that the rejection of independent claims 1, 9, 12, 46 and 52 under §103(a) be withdrawn. Dependent claims 2, 6, 10, 11, 16, 17, 20-22 and 47-51 add novel and non-obvious limitations to their respective independent claims, area also patentable for the reasons set forth above. MPEP §2143.03 (if an independent claim is non-obvious, then a claim that depends from the independent claim is also non-obvious). Further, the

“simulation engine” of Gold and relied upon by the Office action is clearly unrelated to various dependent claims that recite limitations of circuit design simulations and aspects thereof.

V. Claims 23-45 Are Patentable Over Gold, Wang, Robertson and Berry

Independent claims 23 and 35 and respective dependent claims 24-34 and 36-45 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gold in view of Wang and Robertson and further in view of “Toward Automatic State Management for Dynamic Web Services by Berry *et al.* (“Berry”).

Gold is cited as assertedly disclosing a plurality of simulation engines. Applicants respectfully submit that the rejection and Office action assertion are moot in view of the above remarks. Berry is cited for the limited purpose of assertedly disclosing a dynamic web service. Berry, however, does not cure the deficiencies of Gold, Wang and Robertson discussed above. Consequently, assuming *arguendo* the asserted combination of the four cited references were made, the combination would nevertheless fail to disclose or suggest each limitation of independent claims 23 and 35. Accordingly, the rejection under 35 U.S.C. §103(a) should be withdrawn. MPEP § 2143.03.

In addition, there is no suggestion or motivation to combine the cited references. Gold relates to a spacecraft emulation system. (Gold, Abstract). The “simulation engines” disclosed by Gold are used for the purpose of processing spacecraft data. (Gold, col. 2, lines 24-34). Wang, on the other hand, relates to software / hardware simulation systems for use in EDA. (Wang, col. 3, lines 34-52). Robertson relates to allowing access to tools and services, such as EDA software tools, through a portal site. (Robertson, col. 5, lines 5-11). Berry relates to a dynamic web service that generates documents on the fly. (Berry, p. 1, col. 1, para. 3). Given these substantially different fields and applications, the required suggestion or motivation to combine the references is lacking.

Accordingly, Applicants respectfully request that the rejection of independent claims 23 and 35 under §103(a) be withdrawn. Dependent claims 24-34 and 36-45 add novel and non-obvious limitations to their respective independent claims, area also patentable for the reasons set forth above. MPEP §2143.03 (if an independent claim is non-obvious, then a claim that depends from the independent claim is also non-obvious). Further, the “simulation engine” of Gold and relied upon by the Office action is clearly unrelated to various dependent claims that recite limitations of circuit design simulations and aspects thereof.

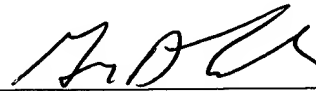
VI. Conclusion

Applicants respectfully request that application is in condition for allowance. If there are any remaining issues that can be resolved by telephone, Applicants invite the Examiner to contact the undersigned at the number indicated below.

Respectfully submitted,

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By: _____



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